

**ABSTRACT OF THE DISCLOSURE**

A gas sensor includes a sensor element formed of a solid electrolyte having an oxygen ion conductivity; a cathode and an anode, each formed of a porous metal material and each formed on the sensor element, to produce a pumping current reflecting a concentration of a detection component in a measurement gas when a predetermined voltage is applied between the cathode and the anode. The detection component contains oxygen. The measurement gas contacts the cathode. The gas sensor also includes a gas diffusion control to vary the oxygen pumping current in accordance with a pressure of the measurement gas by controlling a diffusion of the measurement gas. The measurement gas moves from a measurement atmosphere toward the cathode by way of the gas diffusion control. Thereby, information on the pressure of the measurement gas is obtained based on the oxygen pumping current.